

**Publication List 2019-2023**  
**Aref Lashin**

**Refereed Articles:**

1. Mohammed Hakimi, Aref Lashin, Mikhail A Varfolomeev, Afikah Rahim, Souvik Sen, Waqas Naseem, Shadi A Saeed, Ameen A Al-Muntaser, SM Talha Qadri, Khairul Azlan Mustapha, 2023. Oil generation and expulsion modeling of the syn-rift Salif oil-source rock in the Tihamah Basin, Yemeni Red Sea: Implications for shale oil exploration. *Journal of African Earth Sciences*. V. 202, 104924.
2. Aref Lashin, Mohamed Hail Hakimi, Faisal AlGhamdi, Abiodun Matthew Amao, Abdulrahman AlQuraishi, Khalid Abdel Fattah, and Abdulaziz Bin Laboun. 2023. Elemental Geochemistry and Biomarker Measurements of the Silurian Shale of Qusaiba Formation, Tayma Area, Northwestern Saudi Arabia: Implication for Organic Matter Input and Paleoenvironmental Conditions. *Minerals* V. 13 (4) 468.
3. Mohammed Hail Hakimi, Tamer E Hamed, Naira M Lotfy, Ahmed E Radwan, Aref Lashin, Afikah Rahim, 2023. Hydraulic fracturing as unconventional production potential for the organic-rich carbonate reservoir rocks in the Abu El Gharadig Field, north western Desert (Egypt): Evidence from combined organic geochemical, petrophysical and bulk kinetics modeling results. *Fuel*, V. 334 (1), 126606.
4. Faisal AlGhamdi, Abdulrahman AlQuraishi, Abiodun Amao, Abdulaziz Bin Laboun, Khalid Abdel Fattah, Ali Kahal, Aref Lashin, 2023. Depositional setting, mineralogical and diagenetic implication on petrophysical properties of unconventional gas reservoir of the Silurian Qusaiba formation, northwestern Arabian peninsula, *Geoenergy Science and Engineering*, V. 223, 211563.
5. Mohammed Hail Hakimi, Tamer E Hamed, Naira M Lotfy, Ahmed E Radwan, Aref Lashin, Afikah Rahim, 2023. Hydraulic fracturing as unconventional production potential for the organic-rich carbonate reservoir rocks in the Abu El Gharadig Field, north western Desert (Egypt): Evidence from combined organic geochemical, petrophysical and bulk kinetics modeling results. *Fuel*, V. 334 (1), 126606.
6. Lashin, A., Abu Anbar, M., Aboud, E., Zaidi, F.K., Al Arifi, N., Al-Bassam, A., Al-Homadhi E. 2023. Geochemistry and Petrogenesis of the Ediacaran Post-Collisional Granitoid Rocks in the Midyan Terrain, Northern Arabian Shield, Saudi Arabia, *Minerals*, 13 (3), 379.

7. Mohammed Hail Hakimi, Naira M Lotfy, Mohamed M El Nady, Walid A Makled, Fatma S Ramadan, Afikah Rahim, SM Talha Qadri, Aref Lashin, Ahmed E Radwan, Doaa A Mousa, 2023. Characterization of Lower Cretaceous organic-rich shales from the Kom Ombo Basin, Egypt: Implications for conventional oil generation. *Journal of Asian Earth Sciences*. V. 241, 105459.
8. Shadi A Saeed, Mohammed Hail Hakimi, Ameen A Al-Muntaser, Aliia N Khamieva, Mikhail A Varfolomeev, Vladimir P Morozov, Aref Lashin, Mohamed A Abdelaal, Muneer A Suwaid, Khairul Azlan Mustapha, Richard Djimasbe, Rail I Kadyrov, Bulat I Gareev, Michael Kwofie, 2023. Geochemical, mineralogical and petrographical characteristics of the domanik formation from north samara region in the volga-ural basin, Russia: Implication for unconventional tight oil reservoir potential. V. 220 (A), 111240.
9. Mohammed Hakimi, Atif N Abass, Aref Lashin, Abbas F Gharib, Ahmed E Radwan, Afikah Rahim, Adeeb Ahmed, Lanre Asiwaju, Wafaa E Afify, 2022. Geochemical investigation and basin modelling of the Al renk shale formation in the Melut Basin, south Sudan: Implications for estimation of thermogenic gas generation potential. *Marine and Petroleum Geology*. V. 146, 105926.
10. Aboud, E., Lashin, A., Zaidi, F.K., Al Arifi, N. Al-Bassam, A. Al-Homadhi E, Abu Anbar, M. 2023. Audio Magnetotelluric and Gravity Investigation of the High-Heat-Generating Granites of Midyan Terrane, Northwest Saudi Arabia. *Applied Science*, 13 (6), 3429.
11. Mohammed H. Hakimi, Mohammad Alqudah, Khairul Azlan Mustapha, Mikhail A Varfolomeev, Aref Lashin, Baleid Ali Hatem, Afikah Rahim, Souvik Sen, Ahmed E Radwan, Nura Abdulmumini Yelwa, 2023. Early-Oil Generation Potential of Type II-S Kerogen in the Upper Cretaceous (Cenomanian–Turonian) Organic-Rich Carbonate Succession from Ajloun Region in Northern Jordan. *Arabian Journal for Science and Engineering*. V. 48 (1), 695-710.
12. Zaidi, F.K., Lashin, A. Aboud, E., Al Arifi, N., Al-Bassam, A., Al-Homadhi E, Abu Anbar, M. 2022. Silica geothermometry and multi indices approach to characterize groundwater from Midyan region in Northwestern Saudi Arabia. *Journal of African Earth Sciences* 192, 104557.
13. Mohammed Hail Hakimi, Abbas F Gharib, Mohammad Alqudah, Adeeb Ahmed, Baleid Ali Hatem, Khairul Azlan Mustapha, Nor Syazwani Zainal Abidin, Aref Lashin, Nura Abdulmumini Yelwa, Abdullah M Alqubalee, 2022. *Geochemistry and*

organofacies characteristics of organic-rich chalky marl deposits, northern Jordan: Insights into Type II-S source rock. *Journal of Asian Earth Sciences* 225, 105040.

**14.** AM Amao, A Alquraishi, F Alghamdi, A Lashin, K Elshreef, A Laboun, 2022. Petrophysical Characterization of the Qusaiba Formation, Tabuk Basin, North West Saudi Arabia: Implications for Reservoir Dynamics in a Shale Play. *International Petroleum Technology Conference*.

**15.** SO Onyekuru, OM Iheanyichukwu, A Lashin, EA Okoli, OE Agbasi, 2022. Petrophysics and Flow Zone Indicator evaluation of reservoirs in OKX Field, offshore depobelt, Niger Delta. *Arabian Journal of Geosciences* 15 (4), 1-16.

**16.** MH Hakimi, M Varfolomeev, SMT Qadri, A Lashin, NA Yelwa, A Radwan, 2022. Overview of the Late Jurassic Madbi-Sab'atayn petroleum system in the Marib Concession, northwestern Sab'atayn Basin (Yemen): hydrocarbon from source to trapping. *Arabian Journal of Geosciences* 15 (3), 1-21.

**17.** BS Nabawy, AA Lashin, MK Barakat, 2022. Implementation of lithofacies and microfacies types on reservoir quality and heterogeneity of the Late Cretaceous Upper Bahariya Member in the Shouk Field, Shoushan Basin-Egypt. 2022. *Journal of Asian Earth Sciences* 224, 105014.

**18.** Adeeb Ahmed, Samina Jahandad, Mohammed Hail Hakimi, Abbas F Gharib, Saqib Mehmood, Ali Y Kahal, Muhammad Asif Khan, Muhammad Nofal Munir, Aref Lashin, 2022. Organic matter characteristics and conventional oil potentials of shales from the Early Jurassic Datta Formation in the Upper Indus Basin, Northern Pakistan. *Journal of Asian Earth Sciences* 224, 104975.

**19.** AN Abass, MH Hakimi, A Lashin, NA Yelwa, MME Nady, 2022. Geochemistry of organic-rich shales in the Miocene Miadol Formation, Melut Rift Basin, South Sudan: implications for their organic matter input and oil/gas generation potentials. *Arabian Journal of Geosciences* 15 (1), 1-16.

**20.** Mohammed Hail Hakimi, Shadi A Saeed, Ameen A Al-Muntaser, Mikhail A Varfolomeev, Richard Djimasbe, Aref Lashin, Nura Abdulmumini Yelwa, Muneer A Suwaid, 2022. The origins of paraffinic oils collected from oilfields in the western Siberian Basin, Russia: implications from geochemical and physical characteristics. *Journal of Petroleum Exploration and Production Technology* 12 (1), 35-49.

**21.** MH Hakimi, AA Lashin, MA Varfolomeev, NSZ Abidin, SA Saeed, 2002. Geochemical and physical properties of oils collected from several wells in the

Shabwah depression, Yemen: implications of their characteristic organic matter input and maturity. *Arabian Journal of Geosciences* 14 (23), 1-18.

**22.** MG Safa, BS Nabawy, AMK Basal, MA Omran, A Lashin, 2022. Implementation of a Petrographical and Petrophysical Workflow Protocol for Studying the Impact of Heterogeneity on the Rock Typing and Reservoir Quality of Reefal Limestone: A Case Study on the Nullipore Carbonates in the Gulf of Suez. *Acta Geologica Sinica-English Edition* 95 (5), 1746-1762.

**23.** E Ibrahim, M Arfaoui, S Mogren, S Qaysi, A Lashin, H Alfaifi, 2021. Disposition of magmatic eruptions and fault distribution in northwestern Saudi Arabia using pseudo-depth slice magnetic anomaly. *Journal of Geophysics and Engineering* 18 (4), 463-481.

**24.** MH Hakimi, ES Abdullah, MA Ebiad, MM El Nady, M Kinawy, A Lashin, 2021. Early mature sulfur- rich oils from the Central Gulf of Suez province: bulk property and geochemical investigations of maltene and asphaltene show source related-type. *Arabian Journal of Geosciences* 14 (12), 1-21.

**25.** AJ Al-Khafaji, MH Hakimi, IMJ Mohialdeen, RM Idan, WE Afify, AA Lashin, 2021. Geochemical characteristics of crude oils and basin modelling of the probable source rocks in the Southern Mesopotamian Basin, South Iraq. *Journal of Petroleum Science and Engineering* 196, 107641.

**26.** Alok K Singh, Mohammed Hail Hakimi, Alok Kumar, Adeeb Ahmed, Nor Syazwani Zainal Abidin, Mostafa Kinawy, Osama El Mahdy, Aref Lashin, 2020. Geochemical and organic petrographic characteristics of high bituminous shales from Gurha mine in Rajasthan, NW India. *Scientific reports* 10 (1), 1-19.

**27.** BS Nabawy, E Ibrahim, A Kahal, HJ Alfaifi, AA Lashin, 2020. Impact of authigenic iron oxides, clay content and grain size on the aquifer quality properties of the Cambrian-Ordovician Wajid Sandstone, southwest Saudi Arabia. *Journal of African Earth Sciences* 172, 104000.

**28.** Yousif M Makeen, Mohammed Hakimi, Wan Hasiah Abdullah, Khairul Mustapha, Meor H Amir Hassan, Ismail Shushan, Terfa Garba, Yaman Abujaish, Aref A Lashin, 2020. Basin modelling and bulk kinetics of heterogeneous organic-rich Nyalau Formation sediments of the Sarawak Basin, Malaysia. *Journal of Petroleum Science and Engineering* 195, 107595.

- 29.** H Aboulela, A Amin, A Lashin, A El Rayes, 2020. Contribution of geothermal resources to the future of renewable energy in Egypt: A case study, Gulf of Suez-Egypt. *Renewable Energy*.
- 30.** A Al-Johi, E Ibrahim, S Mogren, A Lashin, 2020. Petrophysical analysis of Upper Qishn Clastic Member Reservoir, Tawila Oilfield, Yemen. *Arabian Journal of Geosciences* 13 (21), 1-31.
- 31.** MZ El Sawy, AA Abuhagaza, BS Nabawy, A Lashin, 2020. Rock typing and hydraulic flow units as a successful tool for reservoir characterization of Bentiu-Abu Gabra sequence, Muglad basin, southwest Sudan. *Journal of African Earth Sciences* 171, 103961.
- 32.** MH Hakimi, A Ahmed, S Mogren, SBA Shah, MM Kinawy, AA Lashin, 2020. Thermogenic gas generation from organic-rich shales in the southeastern Say'un-Masila Basin, Yemen as demonstrated by geochemistry, organic petrology, and basin modeling. *Journal of Petroleum Science and Engineering* 192, 107322.
- 33.** Adebajji Kayode Adegoke, Mohammed Hail Hakimi, Wan Hasiah Abdullah, El-Khedr Ibrahim, Babangida M Sarki Yandoka, Hussain Al Faifi, Aref Lashin, (2020). Geochemistry and oil-gas generation modeling of the Late Cretaceous shales from the Chad (Bornu) Basin, Northeast Nigeria. *Journal of Natural Gas Science and Engineering* 79, 103341.
- 34.** Mohammed Hail Hakimi, Abdulwahab S Alaug, Aref A Lashin, Madyan MA Yahya, Ismail M Ismail, Ekhlal A Al-Maghrabi, Shrook A Mogram, 2020. Evolution of petroleum generation and expulsion of the oil-source rock in the north-western Say'un-Masilah Basin as inferred from 1D basin models of a single well (Al-Qarn-01). *Arabian Journal of Geosciences* 13 (12), 1-15.
- 35.** Mohammed Hail Hakimi, Adel M Al-Matary, Wan Hasiah Abdullah, Adeb Ahmed, Aref A Lashin, Syed Bilawal Ali Shah, Madyan MA Yahya, (2020). Oil source rock characteristics of the pelagic carbonates in the Shabwah depression, southeastern Sabatayn Basin, Yemen. *Carbonates and Evaporites* 35 (2), 1-17.
- 36.** MH Hakimi, AM Al-Matary, O El-Mahdy, BA Hatem, AY Kahal, A Lashin, 2020. Organic geochemistry characterization of Late Jurassic bituminous shales and their organofacies and oil generation potential in the Shabwah depression, southeast Sabatayn, Yemen. *Journal of Petroleum Science and Engineering* 188, 106951.

37. HJ Alfaifi, AY Kahal, K Abdelrahman, FK Zaidi, A Albassam, A Lashin, 2020. Assessment of groundwater quality in Southern Saudi Arabia: case study of Najran area. *Arabian Journal of Geosciences* 13 (3), 1-15.
38. MH Hakimi, WH Abdullah, HJ Al Faifi, KA Mustapha, AY Kahal, AA Lashin, 2020. Source rock evaluation and hydrocarbon generation potential of Mid-Late Cretaceous sediments from Mintaq-01 well in the Wadi Hajar of Southern Sabatayn Basin, Yemen. *Petroleum Science and Technology* 38 (3), 216-224.
39. D Chandrasekharam, A Lashin, N Al Arifi, AM Al-Bassam, 2020. Geothermal energy for sustainable water resources management. *International Journal of Green Energy* 17 (1), 1-12.
40. AJ Al-Khafaji, MH Hakimi, EK Ibrahim, AA Najaf, H Al Faifi, A Lashin 2020. Organic geochemistry of oil seeps from the Abu-Jir Fault Zone in the Al-Anbar Governorate, western Iraq: Implications for early-mature sulfur-rich source rock. *Journal of Petroleum Science and Engineering* 184, 106584
41. D Chandrasekharam, A Lashin, N Al Arifi, AM Al-Bassam, C Varun 2019. Geothermal energy for desalination to secure food security: case study in Djibouti. *Energy, Sustainability and Society* 9 (1), 1-11.
42. MH Hakimi, WH Abdullah, AA Lashin, EKH Ibrahim, YM Makeen 2019. Hydrocarbon Generation Potential of the Organic-Rich Naifa Formation, Say'un–Masila Rift Basin, Yemen: Insights from Geochemical and Palynofacies Analyses. *Natural Resources Research*, 1-29.
43. Chandrasekharam, A Lashin, N Al Arifi, AM Al-Bassam, C Varun 2019. Geothermal energy for desalination to secure food security: case study in Djibouti. *Energy, Sustainability and Society* 9 (1), 24.
44. MH Hakimi, WH Abdullah, OS Hersi, AA Lashin, MM El Alfy, YM Makeen, 2019. Organic geochemistry of the Early Cretaceous shales, Saar Formation in the East Shabwah oil fields, onshore Masila Basin of eastern Yemen. *Journal of Petroleum Science and Engineering* 179, 394-409.
45. MH Hakimi, AS Alaug, AA Lashin, IMJ Mohialdeen, MMA Yahya, 2019. Geochemical and geological modeling of the Late Jurassic Meem Shale Member in the Al-Jawf sub-basin, Yemen: Implications for regional oil and gas exploration. *Marine and Petroleum Geology* 105, 313-330.

46. M El Alfy, A Lashin, T Faraj, A Alataway, Q Tarawneh, A Al-Bassam 2019. Quantitative hydro- geophysical analysis of a complex structural karst aquifer in Eastern Saudi Arabia, Nature (Scientific Reports) 9 (1), 2825.
47. MH Hakimi, IM Ismail, A. Lashin, EKH Ibrahim 2019. Physical and geochemical properties of crude oils in relation to their source rocks, Alif field, Marib Sub-basin, Yemen Petroleum Science and Technology, 1-8.
48. A Al-Johi, E Ibrahim, HJ Al Faifi, MM Kinawy, NS Al Arifi, A Lashin 2019. Investigating deep geological reservoirs using seismic reflection and well logs, Tawila oil field, Yemen: Implications for structural setting and reservoir properties. Journal of Petroleum Science and Engineering. V. 176, 1018-1040.
49. MH Hakimi, AS Alaug, HJ Al Faifi, GA Alramisy, A. Lashin 2019. Late Jurassic Safer Salt Member in the Al-Jawf sub-basin of NW Sabatayn Basin, Yemen: geochemical evaluation of organic-rich oil- source rock potential. Petroleum Science and Technology, 1-10.
50. W Bawazer, A Lashin, MM Kinawy 2019. Characterization of a fractured basement reservoir using high-resolution 3D seismic and logging datasets: A case study of the Sab'atayn Basin, Yemen. PloS one 13 (10), 1556.

### **Conferences:**

1. Lashin A., Chandrasekharam, D., Al Bassam, A., Al Arifi, N., Rehman, S., 2020. A review of the Geothermal Resources of Saudi Arabia: 2015-2020. Proceedings World Geothermal Congress 2020
2. A Lashin, A., 2020. Review of the Geothermal Resources of Egypt: 2015-2020. Proceedings World Geothermal Congress 2020, 1-12.
3. Lashin, E Aboud, S El Khreby, A Al Bassam, N Al Arifi, H Al Faifi 2020. The Geothermal Potentiality of the Saudi Arabian Volcanic Eruptions 'Harrats': An Overview. Proceedings World Geothermal Congress 2020.
4. Ouda O.K.M., Al-Bassam, A., and Lashin, A., 2020. Economic and Technical Potential of Geothermal Energy in the Kingdom of Saudi Arabia. Water-Energy-Nexus in the Ecological Transition: Natural-Based Solutions, Advanced Technologies and Best Practices for Environmental Sustainability.

## **Projects:**

**Project 1:** Enhanced geothermal systems (EGS) of high heat generating granites: Midyan granite, Northwest of Saudi Arabia.

**Role:** Principle Investigator (PI)

**Fund:** 0.60 Million SR (NPST)

**Duration:** 2020-2023

**Project 2:** Unconventional Hydrocarbon Resources: The potential contribution of “Shale Gas” to petroleum system, Tabouk basin- Northwest of Saudi Arabia.

**Role:** Co Investigator (COI)

**Fund:** 0.60 Million SR (NPST)

**Duration:** 2020-2024

## **M.Sc Thesis:**

**Title:** Modelling of Acid Fracturing System for Carbonate Reservoirs: Case Study from Khuff Formation, Saudi Arabia.

**Student Name:** Salman Mohammed Salman Al-Owaidh

**Duration:** 2019-2021 (Presented)